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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,260	06/27/2001	Shigenori Terada	2001-0900A	2441

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EXAMINER

BRUENJES, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,260

Applicant(s)

TERADA ET AL.

Examiner

Christopher P Bruenjes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 29, 2003 has been entered.

WITHDRAWN REJECTIONS

2. The 35 U.S.C. 102 rejections of claims 1 and 3 as anticipated by El-Afandi et al of record in Paper #4, Pages 2-3 Paragraph 2 have been withdrawn due to Applicant's amendments in Paper #12.

3. The 35 U.S.C. 103 rejections of claims 2 and 4 over El-Afandi et al in view of Mennella of record in Paper #4, Pages 4-5 Paragraph 3 have been withdrawn due to Applicant's amendments in Paper #12.

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NEW REJECTIONS

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebato et al (USPN 5,403,897).

Ebato et al teach a biodegradable bag (col.20, 1.15-20 and col.19, 1.53-55) comprising a laminate (col.17, 1.30-32). The entire film including both layers is biaxially oriented by the tenter method (col.16, 1.23-30). The second layer is degradable

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polymer (col.17, 11.30-32). The first layer consists of a block copolymer of an aliphatic polyester formed from chain-hydrocarbon and/or alicyclic-hydrocarbon moieties containing the group -COO- such as the polyester described in formula (1) of claim 1 (col.6, 1.17-24). The aliphatic polyester has a weight-average molecular weight between 10000 and 250000 (col.8, 1.60-65). The alkylene or cycloalkylene groups have a carbon number of 2-10 (col.9, 1.27-28). The aliphatic polyester is a copolymer of butylene glycol or butanediol (col.9, 1.29-31) and succinic acid and adipic acid (col.23-26).

Ebato et al fail to explicitly teach that the second layer or film of the laminate of which the major component is a polylactic acid-family polymer and is an outer layer. However, Ebato et al teach that laminates are formed by laminating or heat sealing using the film described above as the first layer and a second film of degradable polymer (col.17, 1.30-32). Ebato et al further teach that polylactic acid-family polymers are excellent degradable polymers and it is a desire of one skilled in the art to use polylactic acid-family polymers in forming biodegradable articles. One of ordinary skill in the art would have recognized that a polylactic acid-family polymer is used as a degradable polymer when forming biodegradable articles such as bags, because polylactic acid-family polymers

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have excellent biodegradability and it is a desire of one of ordinary skill in the art to use polylactic-acid family polymers in biodegradable articles, as taught by Ebato et al.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to heat seal a film of which the major component is a polylactic acid-family polymer to the outer surface of the first layer, because polylactic acid-family polymers are well known to be desired degradable polymers used to form articles and is chosen as the degradable polymer in the laminate because it has excellent biodegradability, as taught by Ebato et al.

5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebato et al (USPN 5,403,897) in view of Takagi et al (JP 10-146936).

Ebato et al teach all that is claimed in claim 1 as shown above and further teaches that the aliphatic polyester is a copolymer of which the major components are butylene glycol or butanediol and succinic acid and adipic acid (col.9, 1.19-31). Ebato et al fail to explicitly teach a zipper made of biodegradable resin is provided at the mouth portion thereof, and said biodegradable resin contains as the major component a polylactic acid-family polymer, an aliphatic polyester or a

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mixture thereof. However, Takagi et al teach a biodegradable bag containing a laminate of polylactic acid-family polymers blended with aliphatic polyesters like Ebato et al, and further teaches that the bag has a fastener or zipper made of a biodegradable resin of which the major component is aliphatic polyester, which has the same basic structure as the aliphatic polyester used to form the bag itself (see abstract). Takagi et al further teaches that a zipper (chuck in machine translation) must also be biodegradable in order for the entire bag to be environmentally friendly (p.1, paragraph 7 of machine translation). One of ordinary skill in the art would have recognized that a zipper is added to a biodegradable bag in which the zipper is formed from aliphatic polyester having the structure of the formula (1) in claim 1 (p.2, paragraphs 9 and 10), in order for the bag to be fully biodegradable, as taught by Takagi et al.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to form the zipper of Takagi et al from aliphatic polyester having the structure of the formula (1) in claim 1 on the bag of Ebato et al, in order to form the bag from all biodegradable polymers and still have the structural integrity

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needed to function as a fastener for the biodegradable bag, as taught by Takagi et al.

ANSWERS TO APPLICANT'S ARGUMENTS

Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1 and 3 as anticipated by El-Afandi et al have been considered but are moot since the rejections have been withdrawn.

Applicant's arguments regarding the 35 U.S.C. 103 rejections of claims 2 and 4 over El-Afandi et al in view of Mennella have been considered but are moot since the rejections have been withdrawn.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Obuchi et al (USPN 6,417,294) and Imashiro et al (USPN 6,107,378).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.

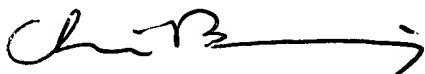
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0987.

Christopher P Bruenjes
Examiner
Art Unit 1772

CPB
January 7, 2004




HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

1/8/04